The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A telechelic (co)polymer comprising polymerized units of one or more free radically (co)polymerizable monomers,
an first azlactone terminal group; and
a second terminal group selected from a xanthate group, a thioxanthate group, or a dithioester group .

2. (Original) The copolymer of claim 1 comprising two or more blocks of units obtained from free radically (co)polymerizable monomers, wherein the block copolymer has first azlactone terminal group and a second terminal group selected from a xanthate group, a thioxanthate group, or a dithioester group.

3. (Original) The (co)polymer of claim 1 comprising polymerized units obtained from two or more radically (co)polymerizable monomers wherein the copolymer has a composition that varies along the length of the polymer chain from azlactone terminus to opposite terminus based on the relative reactivity ratios of the monomers and instantaneous concentrations of the monomers during polymerization.

4. (Original) The (co)polymer of claim 1, wherein said (co)polymer comprises polymerized monomer units selected from the group consisting of (meth)acrylic acid; (meth)acrylates; fumaric acid (and esters), itaconic acid (and esters), maleic anhydride; styrenics; vinyl halides; (meth)acrylonitrile; vinylidene halides; vinyl esters of carboxylic acids; amides of vinyl amines; monomers containing a secondary, tertiary or quaternary amino group; butadienes; unsaturated alkylsulphonic acids or derivatives thereof; 2-vinyl-4,4-dimethylazlactone, and N-vinyl pyrrolidinone and mixtures thereof; said (co)polymer having a first azlactone terminal group and a second terminal group selected from a xanthate group, a thioxanthate group, or a dithioester group.

5. (Original) The (co)polymer of claim 1 having the structure

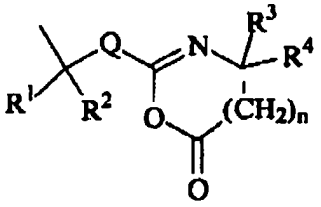
Az-$(M^1)_x$-S-Y, wherein

S-Y is a xanthate group of the formula $R^5$-O-C(S)-S-, a thioxanthate group of the formula $R^5$-S-C(S)-S-, or a dithioester group of the formula $R^5$-C(S)-S-, wherein

$R^5$ is selected from an alkyl group, a cycloalkyl group, an aryl group, a heterocyclic group or an arenyl group;

$M^1$ is a monomer unit derived from a radically (co)polymerizable monomer unit having an average degree of polymerization x, and

Az is an azlactone group of the formula:



wherein $R^1$ and $R^2$ are each independently selected from X, H, an alkyl group, a cycloalkyl group, a heterocyclic group, an arenyl group and an aryl group, or $R^1$ and $R^2$ taken together with the carbon to which they are attached form a carbocyclic ring;

$R^3$ and $R^4$ are each independently selected from an alkyl group, a cycloalkyl group, an aryl group, an arenyl group, or $R^3$ and $R^4$ taken together with the carbon to which they are attached form a carbocyclic ring;

Q is a linking group selected from a covalent bond, $(-CH_2-)_o$, -CO-O-$(CH_2)_o$-, -CO-O-$(CH_2CH_2O)_o$-, -CO-$NR^6$-$(CH_2)_o$-,-CO-S-$(CH_2)_o$-, where o is 1 to 12, and $R^6$ is H, an alkyl group, a cycloalkyl group, an arenyl group, a heterocyclic group or an aryl group;

and n is 0 or 1.

6. (Original) The (co)polymer of claim 5 wherein at least one of $R_1$ and $R_2$ are methyl.

7. (Original) The (co)polymer of claim 5 wherein at least one of $R_3$ and $R_4$ is a $C_1$ to $C_4$ alkyl group.

8. (Original) The (co)polymer of claim 1 having the structure

Az-$(M^1)_x(M^2)_x$-$(M^3)_x$...$(M^n)_x$-SY, wherein

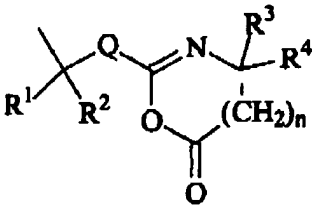
SY is a xanthate group of the formula $R^5$-O-C(S)-S-, a thioxanthate group of the formula $R^5$-S-C(S)-S-, or a dithioester group of the formula $R^5$-C(S)-S-, wherein

$R^5$ is selected from an alkyl group, a cycloalkyl group, an aryl group, a heterocyclic group or an arenyl group;

$M^1$ to $M^n$ are each polymer blocks of monomer units derived from a radically (co)polymerizable monomer units having an average degree of polymerization x,

each x is independent, and

Az is an azlactone group of the formula:



wherein $R^1$ and $R^2$ are each independently selected from X, H, an alkyl group, a cycloalkyl group, a heterocyclic group, an arenyl group and an aryl group, or $R^1$ and $R^2$ taken together with the carbon to which they are attached form a carbocyclic ring; $R^3$ and $R^4$ are each independently selected from an alkyl group, a cycloalkyl group, an aryl group, an arenyl group, or $R^3$ and $R^4$ taken together with the carbon to which they are attached form a carbocyclic ring; Q is a linking group selected from a covalent bond, $(-CH_2-)_o$, -CO-O-$(CH_2)_o$-, -CO-O-$(CH_2CH_2O)_o$-, -CO-$NR^8$-$(CH_2)_o$-,-CO-S-$(CH_2)_o$-, where o is 1 to 12, and $R^8$ is H, an alkyl group, a cycloalkyl group, an arenyl group, a heterocyclic group or an aryl group; and n is 0 or 1.

9. (Original) The (co)polymer of claim 8 wherein at least one of $R_1$ and $R_2$ are methyl.

10. (Original) The (co)polymer of claim 8 wherein at least one of $R_3$ and $R_4$ is a $C_1$ to $C_4$ alkyl group.

11. (Original) The (co) polymer of claim 1 having a star, comb, block, or hyperbranched structure.

12. (Original) The (co) polymer of claim 1 having pendent, nucleophilic functional groups.

13. (Original) The (co)polymer of claim 1 comprising interpolymerized monomer units having pendent, nucleophilic functional groups.

14. (Original) The (co) polymer of claim 13 having pendent, nucleophilic functional groups.

15. (Original) A polymer derived from the reaction between said pendent, nucleophilic functional groups of claim 14 and said azlactone terminal group.